

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IX

IN THE MATTER OF:

Operable Units Nos. 2 and 3 of the
Locust Avenue Superfund Site
San Bernardino County, California

Goodrich Corporation,
Respondent

ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION AND
FEASIBILITY STUDY

U.S. EPA Region IX
CERCLA Docket No. 2013-01

Proceeding Under Sections 104, 107 and 122
of the Comprehensive Environmental
Response, Compensation, and Liability Act, as
amended, 42 U.S.C. §§ 9604, 9607 and 9622.

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT
FOR PERFORMANCE OF A REMEDIAL INVESTIGATION
AND FEASIBILITY STUDY

TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS.....	2
II.	PARTIES BOUND	2
III.	STATEMENT OF PURPOSE	3
IV.	DEFINITIONS.....	3
V.	EPA’S FINDINGS OF FACT	7
VI.	EPA’S CONCLUSIONS OF LAW AND DETERMINATIONS	8
VII.	SETTLEMENT AGREEMENT AND ORDER.....	9
VIII.	DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS	9
IX.	WORK TO BE PERFORMED	11
X.	EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS.....	14
XI.	QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION	16
XII.	SITE ACCESS AND INSTITUTIONAL CONTROLS	18
XIII.	COMPLIANCE WITH OTHER LAWS	18
XIV.	RETENTION OF RECORDS	19
XV.	DISPUTE RESOLUTION	19
XVI.	STIPULATED PENALTIES	20
XVII.	FORCE MAJEURE	22
XVIII.	PAYMENT OF RESPONSE COSTS.....	23
XIX.	COVENANT NOT TO SUE BY EPA	25
XX.	RESERVATIONS OF RIGHTS BY EPA	25
XXI.	COVENANT NOT TO SUE BY RESPONDENTS.....	26
XXII.	OTHER CLAIMS	28
XXIII.	CONTRIBUTION.....	29
XXIV.	INDEMNIFICATION.....	29
XXV.	INSURANCE.....	30
XXVI.	INTEGRATION/APPENDICES	30
XXVII.	ADMINISTRATIVE RECORD	31
XXVIII.	EFFECTIVE DATE AND SUBSEQUENT MODIFICATION.....	31
XXIX.	NOTICE OF COMPLETION OF WORK.....	31

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
OF OPERABLE UNITS NOS. 2 AND 3

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent (“Settlement Agreement”) is entered into voluntarily by the United States Environmental Protection Agency (“EPA”) and Goodrich Corporation (“Respondent”). The Settlement Agreement concerns only the preparation and performance of a remedial investigation and feasibility study (“RI/FS”) for Operable Units 2 and 3 (“OU2” and “OU3,” respectively) at the Locust Avenue Superfund Site (“Site”), located generally in western San Bernardino County, California, and the reimbursement for AOC Future Response Costs incurred by EPA in connection with the RI/FS.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9607 and 9622 (“CERCLA”). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. This authority was further redelegated by the Regional Administrator of EPA Region IX to the Branch Chief (now entitled Assistant Director), Superfund Division, by Regional Delegations R9 1290.15 and R9 1290.20.

3. In accordance with Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), EPA notified the State of California (the “State”) on December 9, 2010 of the negotiations that resulted in this Settlement Agreement. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the U.S. Fish and Wildlife Service and the California Department of Fish and Game on November 15, 2010, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and/or State trusteeship.

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability by Respondent. Respondent does not admit, and retains the right to controvert in any subsequent proceedings (other than proceedings to implement or enforce this Settlement Agreement), the validity of EPA’s findings of fact, conclusions of law and determinations in Sections V and VI of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its heirs, successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent’s responsibilities under this Settlement Agreement.

6. Respondent shall ensure that its contractors and subcontractors, whose annual fee or invoices exceed \$20,000 and perform work in connection with the Settlement Agreement, and

their representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

7. Each undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondent to this Settlement Agreement.

III. STATEMENT OF PURPOSE

8. In entering into this Settlement Agreement, the objectives of EPA and Respondent are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from, or migrating into certain areas of the Site, by completing a Remedial Investigation which has been conducted in substantial part by EPA, as more specifically set forth in the Statement of Work ("SOW") attached as Appendix A to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site, by conducting a Feasibility Study as more specifically set forth in the SOW in Appendix A to this Settlement Agreement; and (c) to recover AOC Future Response Costs incurred by EPA with respect to this Settlement Agreement. EPA and Respondent agree that all response costs incurred by EPA prior to the Effective Date, including oversight costs and costs to prepare the Remedial Investigation and/or Feasibility Study, will be borne solely by EPA. Respondent may request, and EPA can require, that the Remedial Investigation and Feasibility Study for OU2 and OU3 be done separately.

9. The AOC Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess Site conditions in Operable Units Nos. 2 and 3, and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"). Respondent shall conduct all AOC Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidances, policies, and procedures. At Respondent's request, EPA will provide to Respondent, or EPA will assist Respondent in locating, relevant, non-privileged, non-confidential data and documents prepared by EPA or its contractors in connection with the Remedial Investigation and/or Feasibility Study.

IV. DEFINITIONS

10. Unless otherwise expressly provided herein, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. “160-Acre Area” shall mean the area located in San Bernardino County that is bounded by West Casa Grande Drive on the north, Locust Avenue on the east, Alder Avenue on the west, and an extension of Summit Avenue on the south. The 160-Acre Area is depicted generally on the map included in Appendix B.

b. “2010 Record of Decision” or “2010 ROD” shall mean the document entitled “USEPA Superfund Interim Action Record of Decision” relating to the Source Area Operable Unit, Locust Avenue Superfund Site, San Bernardino County, California, EPA ID: CAN000905945, dated September 30, 2010, signed by the Assistant Director, Superfund Division, EPA Region 9, and all attachments thereto.

c. “AOC Future Response Costs” shall mean all costs, including, but not limited to, direct and indirect, intramural and extramural costs, that the United States incurs after the Effective Date in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the AOC Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry (“ATSDR”) costs, the costs incurred pursuant to Paragraph 52 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 38 (emergency response), Paragraph 79 (AOC Work takeover), and all costs the United States incurs issuing one or more record(s) of decision for the Site’s Operable Units Nos. 2 and 3, including, but not limited to developing, writing, seeking public comment on, and responding to public comments on those records of decision.

d. “AOC Work” shall mean all activities, including but not limited to those listed in the Statement of Work attached to this Settlement Agreement, which Respondent is required or agrees to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

e. “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

f. “Day” shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

g. “Effective Date” shall be the effective date of this Settlement Agreement as provided in Section XXVIII.

h. “EPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

i. “Engineering Controls” shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration or seepage of

surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

j. “Goodrich Corporation” shall mean Goodrich Corporation and its officers, directors and employees acting in their official capacity.

k. “Institutional controls” shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

l. “Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

m. “Locust Avenue Superfund Site” or “Site,” also heretofore known as the “B.F. Goodrich Superfund Site,” shall mean the 160-Acre Area and all areas where contamination originating from the 160-Acre Area come to be located.

n. “Municipal solid waste” or “MSW” shall mean waste material: (i) generated by a household (including a single or multifamily residence); or (ii) generated by a commercial, industrial or institutional entity, to the extent that the waste material – (I) is essentially the same as waste normally generated by a household; (II) is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and (III) contains a relative quantity of hazardous substances no greater than the relative quantity of hazardous substances contained in waste material generated by a typical single-family household.

o. “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

p. “Operable Unit No. 1” or “OU1” shall mean the operable unit at the Locust Avenue Superfund Site that addresses the groundwater contamination within the Target Area.

q. “Operable Unit No. 2” or “OU2” shall mean the operable unit at the Locust Avenue Superfund Site that addresses contaminated groundwater at the Site downgradient of the area addressed by OU1. OU2 remedial activities do not include groundwater within the Target Area.

r. “Operable Unit No. 3” or “OU3” shall mean the operable unit at the Locust

Avenue Superfund Site that addresses contaminated soils and soil vapor in the vadose zone at the 160-Acre Area.

s. “OU1 Work Decree” shall mean the Consent Decree that will implement the OU1 work, as lodged with the Court on December 4, 2012.

t. “Paragraph” shall mean a portion of this Settlement Agreement identified by an Arabic numeral. References to paragraphs in the SOW will be so identified (for example, “SOW Paragraph 15).

u. “Parties” shall mean EPA and Respondent.

v. “RCRA” shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.*

w. “Respondent” shall mean Goodrich Corporation.

x. “Section” shall mean a portion of this Settlement Agreement identified by a Roman numeral. References to sections in the SOW will be so identified; for example as “SOW Section V.”

y. “Settlement Agreement” shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVI) and all documents incorporated by reference into this document including without limitation EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

z. “State” shall mean the State of California.

aa. “Statement of Work” or “SOW” shall mean the Statement of Work for development of a RI/FS for OU2 and OU3 as set forth in Appendix A to this Settlement Agreement. The Statement of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement as are any modifications made thereto in accordance with this Settlement Agreement.

bb. “Target Area” shall mean the area of contaminated groundwater described in section 2.11.2 (Description of the Selected Remedy) of the 2010 ROD and/or the OU1 Work Decree.

cc. “Waste Material” shall mean (1) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any “solid waste” under Section 1004(27) of

RCRA, 42 U.S.C. § 6903(27); and (4) any “hazardous waste” under California law, including California Health & Safety Code §§ 25100 *et seq.*

V. EPA’S FINDINGS OF FACT

EPA makes the following findings of fact as a basis for jurisdiction in this Settlement Agreement. Respondent does not in any way admit any of the factual findings made by EPA herein, and retains the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this Settlement Agreement, the validity of EPA’s findings of fact in Section V of this Settlement Agreement.

11. The Site is located in San Bernardino County, California, approximately 60 miles east of the city of Los Angeles. The Site includes a 160-Acre Area in Rialto, California where volatile organic compounds (“VOCs”) and perchlorate have contaminated soil and groundwater, and all areas where contamination from the 160-Acre Area has come to be located, including, but not limited to, groundwater contamination downgradient of the 160-Acre Area. Most or all of the Site is located in the Rialto-Colton Groundwater Basin, an important source of drinking water to residents and businesses in the cities of Rialto, Colton, and Fontana.

12. The 160-Acre Area is part of the former Rialto Ammunition Backup Storage Point (“RABSP”), an inspection, consolidation, and storage facility for rail cars transporting ordnance to the Port of Los Angeles during World War Two. Since the United States sold the RABSP properties in 1946, portions of the area have been used by defense contractors, fireworks manufacturers, and other businesses that used perchlorate salts and/or solvents in their manufacturing processes or products. In 1956 and 1957, West Coast Loading Corporation manufactured and tested photoflash flares and “ground-burst simulators” at the 160-Acre Area and may have used solvents in the manufacturing process. Both products contained potassium perchlorate. From about 1957 to 1962, B.F. Goodrich Corporation conducted research, development, testing, and production of solid-fuel rocket propellant containing ammonium perchlorate, and reportedly used solvents in the manufacturing process. Since the 1960s, the 160-Acre Area has been used by a number of companies that manufactured or sold pyrotechnics, including Pyrotronics, Pyro Spectaculars, and American Promotional Events.

13. The hazardous substances perchlorate, TCE, carbon tetrachloride, methylene chloride, and chloroform have been detected in soil, soil gas, and/or groundwater at the Site. Perchlorate has been detected in groundwater at the Site at concentrations as high as 10,000 µg/L, at groundwater monitoring well PW-2 in April 2006. TCE has been detected in groundwater at the Site at concentrations as high as 1,500 µg/L, at groundwater monitoring well CMW-1A in July 2006. Approximately 4,000 feet downgradient of the 160-Acre Area, at a former water supply well known as West Valley Water District Well 22, perchlorate has been detected at concentrations as high as 1,000 µg/L and TCE as high as 76 µg/L. Further downgradient, at monitoring wells PW-8, PW-5, and PW-9, perchlorate and TCE have been consistently detected above the levels allowed by EPA and State drinking water standards.

14. Chemical contaminants at the Site were intentionally placed in subsurface disposal

pits, dumped on the ground as wastewater, released during fires and explosions, and otherwise released at ground surface. The chemicals contaminated surface and subsurface soils, and have moved downward to the underlying groundwater.

15. Site contaminants may pose human health risks through direct contact with contaminated soil, or through consumption of contaminated groundwater. Large municipal water supply production wells are used to extract groundwater at and near the Site.

16. TCE is an industrial cleaning solvent. Drinking or breathing high levels may cause damage to the nervous system, liver and lungs. Perchlorate is an ingredient in many flares and fireworks, and in rocket propellant, and may disrupt the thyroid's ability to produce hormones needed for normal growth and development.

17. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 23, 2009, 74 Fed. Reg. 48412. In that listing, the Site was named the B.F. Goodrich Superfund Site. If the Consent Decree between Respondent and EPA is finalized and entered by the Court, EPA will propose a rulemaking that will change the name of the Site to the Locust Avenue Superfund Site. For purposes of this Settlement Agreement, the Parties will identify this Site as the Locust Avenue Superfund Site.

18. For the purposes of this Settlement Agreement, EPA has found that Respondent has demonstrated to EPA's satisfaction that Respondent is qualified to perform properly and promptly the actions set forth in this Settlement Agreement.

VI. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

Based on EPA's Findings of Fact set forth above, and as a basis for jurisdiction in this Settlement Agreement, EPA has made the following conclusions of law and determinations. Respondent does not in any way admit any of the conclusions of law and determinations made by EPA herein, and retains the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this Settlement Agreement, the validity of EPA's conclusions of law and determinations in this Section VI of the Settlement Agreement.

19. The Locust Avenue Superfund Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

20. The contamination, including but not limited to TCE and perchlorate, found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and/or constitutes "any pollutant or contaminant" that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA.

21. The conditions described in Paragraphs 13 through 16 of the Findings of Fact, above, constitute an actual and/or threatened "release" of a hazardous substance from the facility

as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

22. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

23. Respondent is a responsible party under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622.

a. Respondent is a person who generated the hazardous substances found at the Site, who at the time of disposal of any hazardous substances owned and operated the Site, and who arranged for disposal of hazardous substances at the Site. Respondent therefore may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

b. Respondent was the "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

c. Respondent was the "owner" and/or "operator" of one or more facilities at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

d. Respondent arranged for disposal or treatment of hazardous substances at the facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

24. The actions required by this Settlement Agreement are necessary to protect the public health, welfare or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

25. EPA has determined that Respondent is qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the AOC Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondent complies with the terms of this Settlement Agreement.

VII. SETTLEMENT AGREEMENT AND ORDER

26. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

27. Selection of Contractors, Personnel. All AOC Work performed under this

Settlement Agreement shall be under the direction and supervision of qualified personnel. Within fourteen (14) days of the Effective Date of this Settlement Agreement, and before the AOC Work outlined below begins, Respondent shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such AOC Work. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001 or subsequently issued guidance) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the AOC Work for Respondent shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. If EPA disapproves in writing of any person's technical qualifications, Respondent shall notify EPA of the identity and qualifications of the replacements within thirty (30) days of the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondent. During the course of the RI/FS, Respondent shall notify EPA in writing of any changes or additions in the personnel used to carry out such AOC Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

28. Within fourteen (14) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, e-mail address and qualifications. To the extent reasonably possible, the Project Coordinator shall be present on Site or readily available during Site AOC Work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within ten (10) days following EPA's disapproval. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA twenty (20) days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent. Documents to be submitted to Respondent shall be sent to: Don Bilder, United Technologies Corporation, Environment, Health & Safety, P.O. Box 3065, West Palm Beach, FL 33402, Tel: (561) 651-4147.

29. EPA has designated Wayne Praskins of the Superfund Division, Region IX, as its Remedial Project Manager ("RPM"). EPA will notify Respondent of a change of its designated Project Coordinator. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the RPM at USEPA, Region

IX, 75 Hawthorne Street, SFD-7-3, San Francisco, CA 94105. One hard copy and one electronic copy of all correspondence shall be sent to the EPA RPM and to the Superfund Records Center, located at 95 Hawthorne Street, 4th floor, San Francisco, CA, 94105. Electronic copies of deliverables shall also be sent to EPA's technical support contractor(s), which is currently CH2M HILL.

30. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's Project Coordinator shall have the authority consistent with the NCP, to halt any AOC Work required by this Settlement Agreement, and to take any necessary response action when s/he determines that conditions at the Site and/or OU2 or OU3 may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of AOC Work.

31. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. Section 9604(a). Such person shall have the authority to observe AOC Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

IX. WORK TO BE PERFORMED

32. Respondent shall complete the RI and conduct the FS in accordance with the provisions of this Settlement Agreement, the SOW, CERCLA, the NCP and EPA guidance, including, but not limited to the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance), and guidance referenced therein, and guidances referenced in the SOW, as may be amended or modified by EPA. The Remedial Investigation ("RI") shall consist of collecting additional data to characterize site conditions, determining the nature and extent of the contamination at or from the Site, assessing risk to human health and the environment and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered. The Feasibility Study ("FS") shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondent shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

33. Upon receipt of the draft FS report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial

alternative has been completed and will evaluate the durability, reliability and effectiveness of any proposed Institutional Controls.

34. Modification of the RI/FS Work Plan.

a. If at any time during the RI/FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the EPA Project Coordinator within ten (10) days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondent and whether it will be incorporated into plans, reports and other deliverables.

b. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA Project Coordinator by telephone within twenty-four (24) hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the RI/FS Work Plan, EPA shall modify or amend the RI/FS Work Plan in writing accordingly. Respondent shall perform the RI/FS Work Plan as modified or amended.

c. EPA may determine that in addition to tasks defined in the initially approved RI/FS Work Plan, other additional AOC Work may be necessary to accomplish the objectives of the RI/FS. Respondent agrees to perform these response actions in addition to those required by the initially approved RI/FS Work Plan, including any approved modifications, if EPA determines that such actions are necessary for a complete RI/FS.

d. Respondent shall confirm its willingness to perform the additional AOC Work in writing to EPA within seven (7) days of receipt of the EPA request. If Respondent objects to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or RI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional AOC Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the RI/FS Work Plan or written RI/FS Work Plan supplement. EPA reserves the right to conduct the AOC Work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions at the Site.

35. Off-Site Shipment of Waste Material. Respondent shall, prior to any off-site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to EPA's Designated Project Coordinator. However, this notification requirement shall not apply to any off-site shipments when the total volume of all

such shipments will not exceed ten (10) cubic yards.

a. Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the remedial investigation and feasibility study. Respondent shall provide the information required by Subparagraph 35.a and 35.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

36. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion. EPA will provide Respondent with reasonable notice of any such meetings.

37. Progress Reports. In addition to the plans, reports and other deliverables set forth in this Settlement Agreement, Respondent shall provide to EPA monthly progress reports by the fifteenth (15th) day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (1) describe the actions which have been taken to comply with this Settlement Agreement during that month, (2) include all results of sampling and tests and all other data received by Respondent, (3) describe AOC Work planned for the next two months with schedules relating such AOC Work to the overall project schedule, (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays, and (5) describe any community relations activities completed during the previous month or planned for the next two months.

38. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the AOC Work which causes or threatens a release of Waste Material from the Site that constitutes an

emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the EPA Project Coordinator or, in the event of his/her unavailability, the On Scene Coordinator (“OSC”) or the Regional Duty Officer, Emergency Planning and Response Branch, EPA Region IX, (800) 300-2193, of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the EPA Project Coordinator, the OSC or Regional Duty Officer at (800) 300-2193 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

39. EPA may provide any plans, reports or other deliverables to stakeholders for their review and comment and, at EPA’s sole discretion, incorporate comments from the stakeholders, if any, into EPA’s own comments. After review of any plan, report or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within thirty (30) days, except where to do so would cause serious disruption to the AOC Work or where previous submission(s) have been disapproved due to material defects.

40. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Subparagraph 39(a), (b), (c) or (e), Respondent shall proceed to take any action required by the plan, report or other deliverable, as approved or modified by EPA subject only to its right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Subparagraph 39(c) and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVI

(Stipulated Penalties).

41. Resubmission.

a. Upon receipt of a notice of disapproval, Respondent shall, within thirty (30) days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the thirty-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 42 and 43.

b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondent shall not proceed further with any subsequent activities or tasks until receiving EPA approval, approval on condition or modification of the following deliverables: RI/FS Work Plan, Sampling and Analysis Plan, or Groundwater Flow Modeling Plan. While awaiting EPA approval, approval on condition or modification of these deliverables, Respondent shall proceed with all other tasks and activities which may be conducted independently of these deliverables, in accordance with the schedule set forth under this Settlement Agreement.

d. For all remaining deliverables not listed above in subparagraph 41.c., Respondent shall proceed with all subsequent tasks, activities and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS, however, EPA will provide justification for requiring Respondent to stop work.

42. If EPA disapproves a resubmitted plan, report or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XV (Dispute Resolution).

43. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondent invokes the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the AOC Work and accrual and payment of any stipulated penalties during Dispute Resolution. If

EPA's disapproval or modification is not otherwise revoked, substantially modified or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

44. In the event that EPA takes over some of the tasks, but not the preparation of the RI Report or the FS Report, Respondent shall incorporate and integrate information supplied by EPA into the final reports.

45. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

46. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

47. Quality Assurance. Respondent shall assure that AOC Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the QAPP and guidances identified therein. Respondent will assure that field personnel used by Respondent are properly trained in the use of field equipment and in chain of custody procedures. Respondent shall only use laboratories which have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA.

48. Sampling.

a. All results of sampling, tests, modeling or other data (including raw data) generated by Respondent, or on Respondent's behalf, during the period that this Settlement Agreement is effective, shall be submitted to EPA in the next monthly progress report as described in Paragraph 37 of this Settlement Agreement. Respondent is not required to submit a report when submitting unvalidated sampling and/or tests or other unvalidated data to EPA. EPA will make available to Respondent validated data generated by EPA unless it is exempt from disclosure by any federal law or regulation.

b. Respondent shall verbally notify EPA and the State at least ten (10) days prior to conducting significant field events as described in the SOW, RI/FS Work Plan or Sampling and Analysis Plan. At EPA's verbal or written request, or the request of EPA's oversight assistant, Respondent shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) or the State of any samples collected in implementing this Settlement

Agreement. All split samples of Respondent shall be analyzed by the methods identified in the QAPP.

49. Access to Information.

a. Respondent shall provide to EPA and the State, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the AOC Work. Respondent shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the AOC Work.

b. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondent asserts business confidentiality claims.

c. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA and the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

50. In entering into this Settlement Agreement, Respondent waives any objections to any data gathered, generated, or evaluated by EPA, the State or Respondent in the performance or

oversight of the AOC Work that has been verified according to the quality assurance/quality control ("QA/QC") procedures required by the Settlement Agreement or any EPA-approved RI/FS Work Plans or Sampling and Analysis Plans. If Respondent objects to any other data relating to the RI/FS, Respondent shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within thirty (30) days of the monthly progress report containing the data.

XII. SITE ACCESS AND INSTITUTIONAL CONTROLS

51. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA, the State, and its representatives, including contractors, with access at all reasonable times to the Site or portion of the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

52. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements as needed or as otherwise reasonably specified in writing by the EPA Project Coordinator. Respondent shall promptly notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may either (i) obtain access for Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate; (ii) perform those tasks or activities with EPA contractors; or (iii) terminate the Settlement Agreement. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondent shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports and other deliverables.

53. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, applicable state law and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

54. Respondent shall comply with all applicable local, state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the AOC Work is to be conducted off-site and requires a federal, state or local permit or approval,

Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

55. During the pendency of this Settlement Agreement and for a minimum of ten (10) years after commencement of construction of any remedial action associated with OUs Nos. 2 or 3, Respondent shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the AOC Work, regardless of any corporate retention policy to the contrary. Until ten (10) years after commencement of construction of any remedial action, Respondent shall also instruct its contractors and agents to preserve all documents, records, and other information of whatever kind, nature or description relating to performance of the AOC Work.

56. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such documents, records or other information, and, upon request by EPA, Respondent shall deliver any such documents, records, or other information to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: 1) the title of the document, record, or other information; 2) the date of the document, record, or other information; 3) the name and title of the author of the document, record, or other information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or other information; and 6) the privilege asserted by Respondent. However, no documents, records or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

XV. DISPUTE RESOLUTION

57. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

58. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for AOC Future Response Costs, it shall notify EPA in writing of its objection(s) within thirty (30) days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have sixty (60) days from EPA's receipt of Respondent's written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing.

59. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Assistant Director level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondent agrees with the decision.

XVI. STIPULATED PENALTIES

60. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraph 61 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure). "Compliance" by Respondent shall include completion of the AOC Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan or other plan approved under this Settlement Agreement, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

61. Stipulated Penalty Amounts - AOC Work.

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Subparagraph 61(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,250	1 st through 14 th day
\$ 2,500	15 th through 30 th day
\$ 5,000	31 st day and beyond

b. Compliance Milestones.

Failure to perform the AOC Work or any other activity required by this Settlement Agreement; failure to timely or adequately submit any report, plan, or other written documents required under this Settlement Agreement or the SOW; failure to comply with any portion of any schedule included in this Settlement Agreement or the SOW; failure to pay timely any amount due under this Settlement Agreement, including but not limited to AOC Future Response Costs pursuant to Section XVIII; or failure to complete any other task required by this Settlement Agreement.

62. In the event that EPA assumes performance of a portion or all of the AOC Work pursuant to Paragraph 79 of Section XX (Reservation of Rights by EPA), Respondent shall be liable for a stipulated penalty in the amount of \$250,000, in addition to reimbursement to EPA of the cost of the AOC Work performed by EPA.

63. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the thirty-first (31st) day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (2) with respect to a decision by the EPA Management Official designated in Paragraph 59 of Section XV (Dispute Resolution), during the period, if any, beginning on the twenty-first (21st) day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

64. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the same and describe the noncompliance. EPA may send Respondent a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

65. All penalties accruing under this Section shall be due and payable to EPA within thirty (30) days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures in accordance with Section XV (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to:

USEPA
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

shall indicate that the payment is for stipulated penalties, and shall reference EPA Region IX; Site/Spill ID Number 09JW; and the EPA Docket Number 2003-01, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s) shall be sent to EPA as provided in Paragraph 29, and to:

Gregory Pennington
Cost Recovery Specialist, SFD-7-5
United States Environmental Protection Agency

75 Hawthorne Street
San Francisco, California 94105

Wayne Praskins
Remedial Project Manager, SFD-7-3
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

66. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the AOC Work required under this Settlement Agreement.

67. Penalties shall continue to accrue as provided in Paragraph 63 during any dispute resolution period, but need not be paid until thirty (30) days after the dispute is resolved by agreement or by receipt of EPA's decision.

68. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 65.

69. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the AOC Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 79. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVII. FORCE MAJEURE

70. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the AOC Work or increased cost of performance.

71. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within forty-eight hours (48) of when Respondent first knew that the event might cause a delay. Within five (5) days thereafter, Respondent shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

72. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. PAYMENT OF RESPONSE COSTS

73. Payments of AOC Future Response Costs.

a. Respondent shall pay EPA all AOC Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a SCORES or any successor report developed by EPA, which includes direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within forty-five (45) days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 74 of this Settlement Agreement. Respondent shall make all payments required by this Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party(ies) making payment and EPA Site/Spill ID number 09JW. Respondent shall send the check(s) to:

USEPA
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, Missouri 63197-9000

b. At the time of payment, Respondent shall send notice that payment has been made to:

Wayne Praskins
Remedial Project Manager, SFD-7-3
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

c. The total amount to be paid by Respondent pursuant to Subparagraph 73.a shall be deposited in the Locust Avenue Superfund Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site or as otherwise deemed appropriate by EPA, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

74. If Respondent does not pay AOC Future Response Costs within forty-five (45) days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance of AOC Future Response Costs. The Interest on unpaid AOC Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondent shall make all payments required by this Paragraph in the manner described in Paragraph 73.

75. Respondent may contest payment of any AOC Future Response Costs under Paragraph 73 if it determines that EPA has made an accounting error or if it believes EPA incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP. Such objection shall be made in writing within forty-five (45) days of receipt of the bill and must be sent to the EPA RPM. Any such objection shall specifically identify the contested AOC Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the forty-five (45) day period pay all uncontested AOC Future Response Costs to EPA in the manner described in Paragraph 73. Simultaneously, Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the state of California and remit to that escrow account funds equivalent to the amount of the contested AOC Future Response Costs. Respondent shall send to the EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested AOC Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within five (5) days of the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 73. If Respondent prevails concerning any

aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 73. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its AOC Future Response Costs.

XIX. COVENANT NOT TO SUE BY EPA

76. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the AOC Work performed under this Settlement Agreement and for recovery of AOC Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of AOC Future Response Costs pursuant to Section XVIII. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

77. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

78. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definition of AOC Future Response Costs;
- c. liability for performance of response action other than the AOC Work;
- d. criminal liability;

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

g. liability for costs incurred after the Effective Date by the Agency for Toxic Substances and Disease Registry related to the Site.

79. AOC Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the AOC Work, is seriously or repeatedly deficient or late in its performance of the AOC Work, or is implementing the AOC Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the AOC Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's determination that takeover of the AOC Work is warranted under this Paragraph. Costs incurred by EPA in performing the AOC Work pursuant to this Paragraph shall be considered AOC Future Response Costs that Respondent shall pay pursuant to Section XVIII (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

80. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the AOC Work, AOC Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the AOC Work or arising out of the response actions for which the AOC Future Response Costs have or will be incurred, including any claim under the United States Constitution, the California Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the AOC Work or payment of any and all AOC Future Response Costs.

81. Except as expressly provided in Section XXI, Paragraphs 83 and 84 (Non-Exempt *De Micromis* and *De Minimis* Waivers), and Paragraphs 86 and 87 (MSW Waiver), these covenants not to sue shall not apply in the event the United States brings a cause of action or issues

an order pursuant to the reservations set forth in Paragraphs 78 (b), (c), and (e) - (g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

82. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

83. Claims Against *De Minimis* and Ability to Pay Parties. Respondent agrees not to assert any claims and to waive all claims or causes of action that it may have (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) for all matters relating to the Site against any person that has entered or in the future enters into a final CERCLA § 122(g) *de minimis* settlement, or a final settlement based on limited ability to pay, under Section 122(g) of CERCLA, 42 U.S.C. § 9622(g), with EPA with respect to the Site. This waiver shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person if such person asserts a claim or cause of action relating to the Site against such Respondent.

84. Claims Against *De Micromis* Parties. Respondent agrees not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that it may have for all matters relating to the Site against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

85. The waiver in Paragraph 84 (Claims Against *De Micromis* Parties) shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person meeting the criteria in Paragraph 84 if such person asserts a claim or cause of action relating to the Site against Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the criteria in Paragraph 84 if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. § 9604(e) or 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6927, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually

or in the aggregate, to the cost of response action or natural resource restoration at the Site.

86. Claims Against MSW Generators and Transporters. Respondent agrees not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that it may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of MSW at the Site, if the volume of MSW disposed, treated, or transported by such person to the Site did not exceed 0.2 percent of the total volume of waste at the Site.

87. The waiver in Paragraph 86 (Claims Against MSW Generators and Transporters) shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person meeting the criteria in Paragraph 86 if such person asserts a claim or cause of action relating to the Site against Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines that: (a) the MSW contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Site; (b) the person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. § 9604(e) or § 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6927; or (c) the person impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site.

88. With respect to any suit or claim brought by them for matters related to this Settlement Agreement, Respondent shall notify the United States and the State in writing no later than 60 days prior to the initiation of such suit or claim. Also, with respect to any suit or claim brought against them for matters related to this Settlement Agreement, Respondent shall notify in writing the United States and the State within ten days of service of the complaint on Respondent. In addition, Respondent shall notify the United States and the State within ten days of service or receipt of any Motion for Summary Judgment and within ten days of receipt of any order from a court setting a case for trial.

XXII. OTHER CLAIMS

89. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent.

90. Except as expressly provided in Section XXI, Paragraphs 83 and 84 (Non-Exempt *De Micromis* and *De Minimis* Waivers), Paragraphs 86 and 87 (MSW Waiver) and Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and

interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607. Nothing in this Settlement Agreement diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

91. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION

92. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. § 9613(f)(2), § 9622 (h)(4), for “matters addressed” in this Settlement Agreement. The “matters addressed” in this Settlement Agreement are the AOC Work and AOC Future Response Costs. Provided, however, that if the United States exercises rights under the reservations in Section XX (Reservation of Rights by EPA), other than in Paragraphs 78.a (claims for failure to meet a requirement of the settlement) or 78.d (criminal liability), the “matters addressed” in this Settlement Agreement will no longer include those response costs or response actions that are within the scope of the exercised reservation. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the AOC Work and AOC Future Response Costs. Except as provided in Section XXI (Covenant Not to Sue by Respondents), Paragraphs 83, 84, 86, and 87 of this Settlement Agreement (Non-Exempt De Micromis, De Minimis, and MSW Waivers), nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any person(s) not party(ies) to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2) and (3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXIV. INDEMNIFICATION

93. Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers,

directors, employees, agents, contractors, subcontractors and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

94. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

95. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of AOC Work on or relating to the Site. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of AOC Work on or relating to the Site.

XXV. INSURANCE

96. At least fifteen (15) days prior to commencing any on-site AOC Work under this Settlement Agreement, Respondent or Respondent's contractor shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of \$ 2,000,000 (two million dollars), combined single limit, naming the EPA as an additional insured with regard to the AOC Work in this Settlement Agreement. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the AOC Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. INTEGRATION/APPENDICES

97. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or

understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

“Appendix A” is the SOW.

“Appendix B” is a map of the Site.

XXVII. ADMINISTRATIVE RECORD

98. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondent shall submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based. Upon request of EPA, Respondent shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Upon request of EPA, Respondent shall additionally submit any previous studies conducted under state, local or other federal authorities relating to selection of the response action, and all communications between Respondent and state, local or other federal authorities concerning selection of the response action. At EPA’s discretion, Respondent shall establish a community information repository at or near the Site, to house one copy of the administrative record.

XXVIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

99. This Settlement Agreement shall be effective on the day the Settlement Agreement is signed by the Assistant Director of the Superfund Division. EPA will provide a copy of his/her signature to Respondent on the day it is signed.

100. This Settlement Agreement may be amended by mutual agreement of EPA and Respondent. Amendments shall be in writing and shall be effective when signed by EPA and notice thereof is provided to Respondent. EPA Project Coordinators do not have the authority to sign amendments to the Settlement Agreement.

101. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXIX. NOTICE OF COMPLETION OF WORK

102. When EPA determines that all AOC Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to site access and institutional controls (Section XII), payment of response costs (Section XVIII) and records retention (Section XIV), EPA will provide written notice to Respondent that the work under this Settlement Agreement is complete. If EPA determines that any such AOC Work has not been completed in accordance with this

Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the RI/FS Work Plan if appropriate, in order to correct such deficiencies, in accordance with Paragraph 34 (Modification of the RI/FS Work Plan). Failure by Respondent to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement.

Agreed this ____ day of _____, 2013.

For Respondent _____

By: _____

Title: _____

It is so ORDERED AND AGREED this 26th day of February, 2013.

BY: Kathleen Salyer

DATE: 2/26/13

Kathleen Salyer
Assistant Director, Superfund Division
Site Cleanup Branch
Region IX
U.S. Environmental Protection Agency

EFFECTIVE DATE: 2/26/13

Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the RI/FS Work Plan if appropriate, in order to correct such deficiencies, in accordance with Paragraph 34 (Modification of the RI/FS Work Plan). Failure by Respondent to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement.

Agreed this 20th day of February, 2013.

For Respondent: Goodrich Corporation

By: 

Title: Peter Gutermann, Attorney-in-Fact for Goodrich Corporation; Vice President & General Counsel, UTC Propulsion and Aerospace Systems

It is so ORDERED AND AGREED this _____ day of _____, 2013.

BY: _____ DATE: _____

Kathleen Salyer
Assistant Director, Superfund Division
Site Cleanup Branch
Region IX
U.S. Environmental Protection Agency

EFFECTIVE DATE: _____

**Appendix A to Settlement Agreement and Administrative Order on Consent,
Docket #2013-01**

**STATEMENT OF WORK
for
Remedial Investigation and Feasibility Study
(RI/FS)**

MID-BASIN & SOILS OPERABLE UNITS (OUs Nos. 2 and 3)

**LOCUST AVENUE SUPERFUND SITE
(formerly the B.F. Goodrich Superfund Site)**



US EPA Region 9
February 26, 2013

Statement of Work for Remedial Investigation/Feasibility Study

Table of Contents

1.	Introduction and General Requirements	1
1.1.	Purpose	1
1.2.	EPA Oversight and Review and State Review	1
1.3.	Communication between EPA, Respondent, and State Agencies	2
1.4.	Contractor Personnel and Qualifications	2
1.5.	Reporting to EPA and the State	2
1.6.	EPA Guidance and Reference Materials	3
2.	Site and Operable Unit Background	3
2.1.	The Locust Avenue Superfund Site	3
2.2.	Source Area Operable Unit (OU 01)	4
2.3.	Mid-Basin Operable Unit (OU 02)	5
2.4.	Soils Operable Unit (OU 03)	5
2.5.	Conceptual Site Model (CSM)	5
3.	List of Deliverables and Other Tasks	7
3.1.	Remedial Investigation/Feasibility Study Work Plan	7
3.2.	Sampling and Analysis Plan	13
3.3.	RI Field Work	13
3.4.	Groundwater Flow Modeling Plan	14
3.5.	Groundwater Flow Modeling	14
3.6.	Groundwater Flow Modeling Report	14
3.7.	Interim Remedial Investigation Report(s)	14
3.8.	Remedial Alternatives Screening TM	14
3.9.	Remedial Alternatives Evaluation TM	14
3.10.	ARARs TM	14
3.11.	Risk Assessment TM	14
3.12.	RI/FS Report	15
3.13.	Soils OU Evaluation TM	15
3.14.	Community Involvement Activities	15
4.	Sampling and Analysis Plan(s) and Health and Safety Plan(s)	15
	Attachment 1 to the SOW: Site Map	18
	Attachment 2 to the SOW. Due Dates for Major Deliverables and Other Activities	19
	Attachment 3 to the SOW. Selected Guidance and Resources	22
	Attachment 4 to the SOW. Documents and Data Relevant to the MBOU	24
	Attachment 5. Documents and Data Relevant to the Soils OU	25

Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	CA Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
HSP	Health and Safety Plan
IC	Institutional Control
MCL	Maximum Contaminant Level
OU	Operable Unit
QA/QC	Quality Assurance/ Quality Control
QAPP	Quality Assurance Project Plan
RAOs	Remedial Action Objectives
RI/FS	Remedial Investigation/ Feasibility Study
SAP	Sampling and Analysis Plan
SOW	Statement of Work
TM	Technical Memorandum
VOC	Volatile Organic Compound
Water Board	Regional Water Quality Control Board

**STATEMENT OF WORK FOR
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
Operable Units Nos. 2 & 3
Locust Avenue Superfund Site**

1. Introduction and General Requirements

1.1. Purpose

This Statement of Work (“SOW”) describes activities to be performed by the Respondent (“Goodrich”) at the Locust Avenue Superfund Site (“Site”) pursuant to the Settlement Agreement and Administrative Order on Consent, Docket # 2013-01 (the “Settlement Agreement”). The Site was formerly known as the B.F. Goodrich Superfund Site. The Settlement Agreement requires Respondent to conduct a Remedial Investigation and Feasibility Study (“RI/FS”) for the Mid-Basin and Soils Operable Units (“OUs”) Nos. 2 and 3 (“OU 02” and “OU 03,” respectively) at the Site. EPA will use the results of the RI/FS to identify and propose remedial actions needed to address human health or ecological risks at these two operable units.

The Respondent shall furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing and completing the Work.

1.2. EPA Oversight and Review and State Review

In accordance with the schedules established in the Settlement Agreement or in this SOW, Respondent shall submit to EPA and the State of California (the “State”) plans, reports and other deliverables required under the Settlement Agreement, this SOW and the Work Plan required by Section 3.1 of this SOW. All plans, reports and other deliverables will be reviewed and approved or disapproved by EPA pursuant to Section X of the Settlement Agreement (“EPA Approval of Plans and Other Submissions”), except for the Health and Safety Plan(s), which will be reviewed by EPA but neither approved nor disapproved.

If EPA disapproves a deliverable and requests modifications, the Respondent shall revise the deliverable and resubmit it to EPA and the State, as provided in Section X of the Settlement Agreement. After Respondent’s receipt of EPA comments, if any, on a draft document, Respondent shall submit for EPA and State review a revised document within 14 days of receipt of such comments or within 21 days of receipt of such comments for the RI/FS Work Plan, Sampling & Analysis and Health and Safety Plans for RI fieldwork, Interim RI Reports, Groundwater Flow Modeling Plan, Groundwater Flow Modeling Report, Remedial Alternatives

Identification and Screening TM, Remedial Alternatives TM, RI/FS Report and Soils OU Evaluation TM, unless specified otherwise in the Settlement Agreement, in Attachment 2 to this SOW, or in writing by EPA.

EPA will review deliverables to assess the likelihood that the Work will achieve the requirements set forth in the Settlement Agreement and this SOW. Notwithstanding any action by EPA or the State, Respondent remains fully responsible for satisfying the provisions and requirements of the Settlement Agreement and this SOW. Nothing in the Settlement Agreement, this SOW, or any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA or the State that full performance of the RI and FS will achieve these requirements. Respondent's compliance with submissions approved by EPA does not foreclose EPA from seeking additional work as provided for in the Settlement Agreement.

1.1. Communication between EPA, Respondent, and State Agencies

The primary EPA contact for activities to be conducted pursuant to this Statement of Work is the EPA Project Coordinator, Wayne Praskins, praskins.wayne@epa.gov.

The alternate contact is Richard Hiatt, Section Chief, California Site Cleanup Section 3, hiatt.richard@epa.gov.

The California Department of Toxic Substances Control ("DTSC") contact is Rafat Abbasi, Senior Project Manager, rabbasi@dtsc.ca.gov.

The Santa Ana Regional Water Quality Control Board ("Water Board") contact is Kurt Berchtold, Executive Officer, kberchtold@waterboards.ca.gov.

1.2. Contractor Personnel and Qualifications

As required by Section VIII of the Settlement Agreement, and in accordance with the schedule included as Attachment 2 to this SOW, Respondent shall notify EPA in writing of the names, titles, and qualifications of the supervising personnel, including contractors to be used in carrying out the Work, and provide a copy of the proposed contractor's Quality Management Plan ("QMP"). EPA will issue a notice of disapproval or an authorization to proceed regarding hiring of the proposed contractor.

1.3. Reporting to EPA and the State

1.3.1. Monthly Progress Report

The Respondent shall prepare and submit written Monthly Progress Reports as required by Section IX of the Settlement Agreement. The progress reports shall, at a minimum:

- (1) describe the actions that have been taken to comply with this Settlement Agreement

during that month, (2) describe Work planned for the next two months with schedules relating such Work to the overall project schedule, (3) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays; (4) describe any modifications to the work plans that the Settling Work Defendant has proposed to the EPA or that has been approved by the EPA, and (5) describe any community relations activities completed during the previous month or planned for the next two months. Progress reports are due by the fifteenth day of every month.

1.3.2. Progress Meetings and Documentation of Critical Decisions

Any critical decisions made in meetings or conversations with EPA representatives shall be documented in a written submittal submitted by Respondent to EPA and the State within five (5) days of the decision. The submittal shall document the decision and the rationale for the decision.

1.3.3. Reporting During Field Efforts

The Respondent shall communicate more frequently when field work is occurring, in accordance with any requirements in the approved Work Plan or any approved Sampling and Analysis Plans ("SAPs") submitted in accordance with this SOW.

1.4. *EPA Guidance and Reference Materials*

Respondent shall complete the Work in accordance with the provisions of the Settlement Agreement, this SOW, CERCLA, the NCP, and EPA guidance, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance), guidance referenced therein, and guidances referenced in Attachment 3 to this SOW.

2. Site and Operable Unit Background

2.1. *The Locust Avenue Superfund Site*

The Site is located in San Bernardino County, California, approximately 60 miles east of the City of Los Angeles. The Site was added to the National Priorities List in September 2009.

The Comprehensive Environmental Response, Compensation, and Liability Information System ("CERCLIS") Identification Number for the site is CAN000905945.

The Site includes a 160-Acre Area in Rialto, California where volatile organic compounds

(“VOCs”) and perchlorate have contaminated soil and groundwater, and all areas where contamination from the 160-Acre Area has come to be located, including, but not limited to, groundwater contamination downgradient of the 160-Acre Area. The 160-Acre Area is bounded by West Casa Grande Drive on the north, Locust Avenue on the east, Alder Avenue on the west, and an extension of Summit Avenue on the south.

Most or all of the Site is located in the Rialto-Colton Groundwater Basin, an important source of drinking water to residents and businesses in the cities of Rialto, Colton, and Fontana.

The 160-Acre Area is part of the former Rialto Ammunition Backup Storage Point (“RABSP”), an inspection, consolidation, and storage facility for rail cars transporting ordnance to the Port of Los Angeles during World War II. Since the United States sold the RABSP properties in 1946, portions of the area have been used by defense contractors, fireworks manufacturers, and other businesses that used perchlorate salts and/or solvents in their manufacturing processes or products. In 1956 and 1957, West Coast Loading Corporation manufactured and tested photoflash flares and “ground-burst simulators” on the 160-Acre Area. Both products contained potassium perchlorate, and West Coast Loading reportedly used solvents in its operations. From about 1957 to 1962, B.F. Goodrich Corporation conducted research, development, testing, and production of solid-fuel rocket propellant containing ammonium perchlorate, and reportedly used solvents in the manufacturing process. Since the 1960s, the 160-Acre Area has been used by a number of companies that manufactured or sold pyrotechnics that contained perchlorate salts, including Pyrotronics, Pyro Spectaculars, and American Promotional Events.

2.2. Source Area Operable Unit (OU 01)

The Source Area Operable Unit (“SAOU” or “OU 01”) addresses a portion of the contaminated groundwater at the Site. The targeted area includes groundwater contamination at the 160-Acre Area and extending approximately 1½ miles to the southeast.

EPA completed an RI/FS and adopted a Record of Decision (“ROD”) for the SAOU in January and September 2010 respectively. EPA’s selected remedy is a groundwater pump and treat system intended to intercept (i.e., “hydraulically control”) contaminated groundwater in the targeted area. The remedy is expected to include the construction and operation of one or more groundwater extraction wells; liquid-phase granular activated carbon (“LGAC”) to remove trichloroethene (“TCE”) and other volatile organic compounds (“VOCs”) from the extracted groundwater; ion exchange to remove perchlorate from the extracted groundwater; pipelines and pumps to convey the treated water from the treatment plant to one or more local water utilities for distribution to the utility’s customers as drinking water supply; and a groundwater monitoring program. In the September 2010 ROD, EPA estimated the cost of the remedy as \$13 million for design and construction, and \$1.3 million for annual operation and maintenance. EPA lodged a Consent Decree in December 2012 requiring Emhart Industries to design, construct, and operate the remedy.

2.3. *Mid-Basin Operable Unit (OU 02)*

The Mid-Basin Operable Unit (“MBOU”), or OU 02, shall mean the operable unit at the Locust Avenue Superfund Site that addresses contaminated groundwater at the Site downgradient of the area addressed by the SAOU. The RI/FS for the MBOU shall assess the need to, and identify methods that might be employed to, satisfy the following preliminary remedial objectives:

...hydraulically contain groundwater at the MBOU where contaminant concentrations exceed Maximum Contaminant Levels (MCLs), to protect water supply wells and groundwater resources threatened by the spread of contaminated groundwater from the MBOU;

...remove contaminants from groundwater at the MBOU until concentrations of COCs in the aquifer are below State and Federal MCLs (“aquifer restoration”).

Attachment 4 lists reports containing RI data relevant to the MBOU.

2.4. *Soils Operable Unit (OU 03)*

The Soils OU, or OU 03, shall mean the operable unit at the Locust Avenue Superfund Site that addresses contaminated soils and soil vapor in the vadose zone located at the 160-Acre Area. The RI/FS for the Soils OU shall assess the need to, and identify methods that might be employed to, satisfy the following preliminary remedial objectives:

... prevent direct contact with contaminated soils presenting an unacceptable human health or ecological health risk

... eliminate unacceptable risks to human health caused by the intrusion of volatile subsurface contaminants into the indoor air of overlying buildings (i.e., “vapor intrusion”)

... reduce contaminant movement from the soil and soil vapor on the 160 Acre Area to the groundwater where remediation would significantly reduce contaminant loading to groundwater

Attachment 5 lists reports containing RI data relevant to the Soils OU.

2.5. *Conceptual Site Model (CSM)*

The preliminary Conceptual Site Model (“CSM”) for the Site is as follows:

- Perchlorate, TCE, and other chemicals were released to the environment at multiple locations on the 160-Acre Area over a period of decades.

Appendix A to Administrative Settlement Agreement and Order on Consent, Docket #2013-01

- Release mechanisms included onsite disposal in unlined pits, leakage or overflow from an onsite impoundment, airborne dispersion of material handled during manufacturing, disposal of contaminated rinse water onto unpaved areas, and explosions.
- Releases began in the 1950s, and possibly earlier.
- Some of the chemicals released to the environment contaminated surface and near surface soils, then migrated downward to the groundwater through the several-hundred-foot-thick vadose zone.
- The downward movement of contaminants is the result of infiltration of rainfall and other liquids as well as diffusion.
- Groundwater movement has created plumes of groundwater contamination extending more than three miles downgradient of the 160-Acre Area.
- In years of above-average rainfall, groundwater levels and contaminant concentrations in groundwater increase beneath the 160-Acre Area, suggesting that significant contaminant mass is still present in the vadose zone.
- The leading edge of site-related contamination is downgradient of the PW-9 groundwater monitoring well, and may be downgradient of the CPW-16 monitoring well.
- Contaminated groundwater has historically moved from the 160-Acre Area in a southeasterly direction.

The following facts and observations are relevant to the CSM and the extent of groundwater contamination beyond PW-9:

- Perchlorate and TCE were used, disposed, and have been detected in soil and/or soil vapor at the 160-Acre Area.
- Perchlorate concentrations at three groundwater wells downgradient of the 160-Acre Area (PW-5, PW-9, and CPW-16) generally decrease with distance from the 160-Acre Area. In 2012, maximum perchlorate concentrations were 1,000, 460, and 180 micrograms per liter (ug/L) at the three wells respectively
- TCE concentrations at the same three wells (PW5, PW9, and CPW-16) also decrease with distance from the 160-Acre Area. Maximum TCE concentrations in 2012 at the three wells were 19, 6.4, and 3(J) ug/L.
- The majority of the perchlorate and TCE detected in the three wells (PW-5, PW-9, and CPW-16) is present in the upper 200' of the aquifer.
- Deeper perchlorate and TCE contamination has also been detected in PW-9, from about 370 to 470 feet below the water table. When tested by the USGS in 2011, contaminated groundwater was observed to be moving from the shallow to the deeper portion of the aquifer through the adjacent Rialto-06 wellbore.
- Neither perchlorate nor TCE have been detected at groundwater monitoring well EPA-MP1, located between PW-9 and CPW-16.
- To date, no sources of perchlorate or TCE contamination have been identified between EPA-MP1 and CPW-16.
- Perchlorate contamination first appeared at the Rialto-06 well in about 2000 and concentrations increased thereafter.

- Perchlorate concentrations at the CPW-16 well location have risen steadily in the two most contaminated well zones. The maximum concentrations in 2009, 2010, 2011, and 2012 were 45, 91, 160, and 180 ug/L. The highest concentrations are more than 150' below the water table.

3. List of Deliverables and Other Tasks

Respondent shall plan and conduct an RI/FS for the MBOU and Soils OU in accordance with relevant EPA regulations and guidance. The RI/FS shall, among other things, adequately characterize the sources, nature, extent, and movement of contamination; include any needed field investigation; identify “applicable or relevant and appropriate requirements” (“ARARs”); assess potential risks to human health and the environment and, if necessary, develop, screen, and evaluate remedial action alternatives.

Respondent shall submit plans, reports, and other deliverables for EPA and State review. For the MBOU, this SOW requires written submittals describing the results of the baseline risk assessment, identifying ARARs, describing the development and screening of remedial alternatives, and providing the results of the detailed evaluation of remedial alternatives, as well as an RI/FS Report. For the Soils OU, this SOW requires a written submittal evaluating the need for a response action to remediate contaminated soils at the Soils OU. Major deliverables are specified in Attachment 2. Pursuant to Section X of the Settlement Agreement, EPA may approve, disapprove, or modify each deliverable.

Respondent shall implement quality control procedures to ensure the quality of all reports and submittals to EPA and the State. These procedures shall include, but are not limited to, internal technical and editorial review; and documentation of all reviews, problems identified, and corrective actions taken.

3.1. Remedial Investigation/Feasibility Study Work Plan

The Respondent shall submit a draft RI/FS Work Plan (hereafter “Work Plan”) for EPA review and approval in accordance with Section IX of the Settlement Agreement and relevant EPA guidance. The Work Plan shall describe the tasks required to complete the RI/FS, the methodologies to be used, information to be produced during and at the conclusion of each task, a description of the work products that will be submitted to EPA, and a schedule for their completion.

Respondent shall submit a revised RI/FS Work Plan if directed by EPA. Upon approval by EPA, Respondent shall implement the Work Plan. Upon its approval by EPA pursuant to Section X of the Settlement Agreement, the Work Plan (and other plans, reports, and deliverables submitted to EPA under the Settlement Agreement) shall be incorporated into and become enforceable under the Settlement Agreement. The Work Plan shall include the elements described in Sections 3.1.1 through 3.1.15 of this SOW.

3.1.1. Brief Description and Conceptual Site Model (CSM) of the Site, the SAOU, the MBOU, and the Soils OU

The Work Plan shall include a brief description of the Site, the Source Area OU, the Mid-Basin OU, and the Soils OU, including the sources, nature, and extent of soil and groundwater contamination; and geographic, hydrogeologic, ecological, cultural, or natural resource features relevant to the RI/FS.

The Work Plan shall also provide a current conceptual site model (CSM) and provisions for updating the CSM at or near the completion of the RI.

3.1.2. Data Management

The Work Plan shall describe how water level, water quality, and other data to be compiled during the RI/FS will be managed.

3.1.3. RI Activities

The Work Plan shall describe previous findings relevant to the MBOU and the Soils OU, and field activities needed to complete the RI for these operable units. The Work Plan shall include provisions for submittal of one or more SAPs and a Health and Safety Plan (“HSP”) that will generate data needed to satisfy the following objectives:

- refine the CSM and fill data gaps;
- prepare baseline health risk assessments for human and ecological receptors;
- support the development and evaluation of remedial action alternatives for the MBOU;
- help EPA determine whether remedial action is needed at the Soils OU, and support the development and evaluation of remedial action alternatives if remedial action may be needed;
- provide any other data needed to complete the RI/FS;
- provide data to address any concerns about the quantity, quality, completeness, or usability of water quality or other data that will be used in the RI/FS.

The RI investigation is expected to include, at a minimum:

- a review of existing data developed by EPA and others;
- construction and sampling of new groundwater monitoring wells to define the nature and extent, including the leading edge, of contamination at the MBOU;
- construction and sampling of new groundwater monitoring wells to better define groundwater flow directions downgradient of PW-9;

- semi-annual to annual measurements of groundwater elevations and collection and analysis of groundwater samples for possible COCs from new and selected existing groundwater wells;

The RI may include, and the Work Plan should evaluate the value of additional field work and/or analysis to:

- identify sources, other than the 160 Acre Area, of perchlorate and TCE in groundwater downgradient of PW-9;
- identify and assess the impact of subsurface geologic features on groundwater movement at the Site, including efforts to better quantify the location and rate of groundwater movement across the Rialto-Colton fault in the vicinity of the MBOU;
- determine whether the perchlorate detected in certain contaminated wells in or near the MBOU is of synthetic, Chilean, or local origin.

As described in more detail in Section 4 of this SOW, the SAP shall describe planning, field, laboratory, data review and interpretation, and reporting efforts needed to satisfy the RI objectives. Concurrently with the SAP, Respondent shall submit for EPA review and comment a Site Health and Safety Plan that ensures the protection of on-site workers and the public during performance of on-site Work under the Settlement Agreement.

3.1.4. Interim RI Submittal(s)

The Work Plan shall include provisions for the preparation and submittal to EPA of one or more Interim RI Reports that summarize the results of RI field activities. If appropriate, the reports shall update figures showing water level contours and/or the nature and extent of soil or groundwater contamination in plan view and/or vertical cross section; update the CSM; and make recommendations for any additional RI work needed to complete the RI/FS.

3.1.5. Groundwater Flow Modeling

The Work Plan shall include provisions for the use of a numeric groundwater flow model to better understand groundwater movement at the Site, support the placement of groundwater monitoring wells and complete other field activities, and/or evaluate remedial alternatives. The Work Plan shall include provisions for submittal to EPA of a Groundwater Flow Modeling Plan, preliminary modeling results, and a Groundwater Flow Modeling Report at the completion of each discrete modeling effort.

The model shall be calibrated over a wide-range of hydrogeological conditions and have the capability to simulate transient conditions in three dimensions. The model shall be capable of conducting particle tracking simulations to evaluate hydraulic control. The modeling effort should consider the procedures outlined in EPA's guidance document "A

Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA/600/R-08/003, January 2008.”

3.1.6. Risk Assessment

The Work Plan shall include provisions for the preparation and submittal of a Technical Memorandum (“TM”) that presents the results of a Baseline Human Health Risk Assessment for the MBOU. The risk assessment shall be conducted in accordance with applicable EPA guidance, including but not limited to “Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part A),” (RAGS, EPA-540-1-89-002, OSWER Directive 9285.7-01A, December 1989); and “Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments),” (RAGS, EPA 540-R-97-033, OSWER Directive 9285.7-01D, January 1998).

The risk assessment shall address all pathways of exposures that pose an actual or potential risk to human health and the environment (e.g., human consumption, dermal contact, or inhalation), and should consider the potential for contaminated soil, soil vapor, or groundwater to serve as a source of contamination to other media (e.g., for vapor intrusion into buildings).

The Work Plan shall include provisions for the preparation and submittal of a Technical Memorandum that presents the results of an ecological risk assessment for the MBOU in accordance with applicable EPA guidance including “Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments” (ERAGS, EPA-540-R-97-006, OSWER Directive 9285.7-25, June 1997). The first step of the risk assessment shall be a determination as to whether there are potentially complete exposure pathways for site contaminants to ecological receptors. If no potentially complete exposure pathways exist, then the ecological risk assessment is complete with documentation of that finding and no further work is necessary.

An assessment of human health and ecological risks associated with the Soils OU shall be included in the evaluation of the need for a response action to remediate contaminated soils at the Soils OU, as described in Section 3.1.12 of this SOW.

3.1.7. Treatability Studies

The Work Plan shall include provisions for treatability studies, or document why they are not needed.

3.1.8. Remedial Alternatives Development and Screening

The Work Plan shall include provisions for the preparation and submittal to EPA of a Technical Memorandum that: i) identifies remedial action objectives for Engineering Controls and any Institutional Controls (“ICs”) needed to protect human health and the environment by eliminating, reducing, or otherwise controlling risks posed by contaminated groundwater at the MBOU; ii) identifies a range of remedial actions to address the risks; and iii) provides the results of an initial screening of alternatives to reduce the number of potential remedies for the final detailed evaluation.

The need to develop and screen remedial alternatives at the Soils OU shall be addressed in the evaluation of the need for a response action to remediate contaminated soils at the Soils OU, as described in Section 3.1.12 of this SOW.

3.1.9. Detailed Evaluation of Remedial Alternatives

The Work Plan shall include provisions for the preparation and submittal to EPA of a TM that presents a detailed evaluation of remedial alternatives that pass the initial screening based on the nine evaluation criteria specified in 40 CFR 300.430[e][9].

The submittal shall present a detailed evaluation of remedial alternatives that pass the initial screening, exclusive of any ICs.

The submittal shall also evaluate any ICs identified as a component of the remedial alternatives. The evaluation shall (1) state the objectives (i.e., what will be accomplished) for the ICs; (2) determine the specific types of ICs that can be used to meet the remedial action objectives; (3) investigate when the ICs need to be implemented and/or secured and how long they must be in place; (4) research, discuss and document any agreement with the proper entities (e.g., state and/or local government entities, local landowners, conservation organizations, Respondent) on exactly who will be responsible for securing, maintaining and enforcing the ICs.

The need for a detailed evaluation of remedial alternatives at the Soils OU shall be addressed in the evaluation of the need for a response action to remediate contaminated soils at the Soils OU, as described in Section 3.1.12 of this SOW.

3.1.10. ARARs

The Work Plan shall include provisions for the preparation and submittal to EPA of a TM that describes applicable or relevant and appropriate requirements under federal or state environmental law that specify the remedial standard or level of control for each hazardous substance, pollutant, or contaminant.

The TM shall address ARARs at the MBOU. ARARs associated with the Soils OU shall be included or addressed in the evaluation of the need for a response action to remediate contaminated soils at the Soils OU, as described in Section 3.1.12 of this SOW.

3.1.11. MBOU RI/FS Report

The Work Plan shall include provisions for submittal to EPA of a draft RI/FS Report for the MBOU in accordance with EPA regulations and guidance. The RI/FS Report shall provide, summarize, or discuss the following:

- Site background and setting;
- Sources, nature and extent of groundwater contamination;
- Results of groundwater modeling conducted in support of the RI/FS;
- Baseline human health and ecological risk assessments;
- Data quality and usability;
- Remedial action objectives;
- ARARs;
- The 1961 Rialto-Colton decree;
- The identification and screening of remedial alternatives;
- A detailed analysis of remedial alternatives, including an evaluation of ICs;
- The roles and responsibilities of water utilities or other third parties required for implementation of each remedial alternative;
- Existing facilities (e.g., groundwater extraction wells, water treatment systems, pipelines) that may be used as part of a remedy, including their planned use, condition, expected life and the potential for increased maintenance or reduced lifespan compared to new facilities.

The RI/FS report, when complete, and the administrative record, shall provide the basis for a Proposed Plan and Record of Decision to be prepared by EPA in accordance with CERCLA Sections 113(k) and 117(a). Upon receipt of the draft RI/FS report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability and effectiveness of any proposed ICs.

3.1.12. Need for Response Action at the Soils OU

The Work Plan shall include provisions for an evaluation of the need for a response action to remediate contaminated soils at the Soils OU, and submittal of a written report describing the results of the evaluation. The evaluation should examine potential human health and ecological health risks from direct contact with contaminated soils, vapor intrusion, and any other relevant pathways, ARARs, and provide sufficient detail to support an EPA determination of the need for a response action in a ROD or other EPA decision document. The evaluation of direct contact risk should consider EPA Regional Screening Levels ("RSLs"), California Human Health Screening Levels ("CHHSLs"),

and other relevant criteria. The evaluation should also consider the threat that contaminated soils and soil vapor pose to the underlying groundwater.

EPA will review the written report and expects to either: 1) make a determination on the need for a response action; 2) direct Respondent to complete additional RI work needed to make a determination; or 3) direct Respondent to complete an FS or EE/CA that evaluates remedial or removal alternatives in accordance with EPA guidance.

3.1.13. Updated Project Schedule.

The Work Plan shall include a schedule consistent with Attachment 2 of this SOW that provides dates for deliverables and other critical path activities required during the RI/FS. The schedule shall include time for EPA and State review of written deliverables and for meetings with EPA representatives when appropriate.

3.1.14. Roles and Responsibilities of Key Personnel and Organizations.

The Work Plan shall describe the roles and responsibilities of individuals and organizations involved in the RI/FS effort, including contractors and major subcontractors.

3.1.15. Permits, Access, Coordination, and Compliance with Substantive Requirements

The Work Plan shall list all permits, easements, access agreements, and approvals required for implementation of the RI or FS.

3.2. *Sampling and Analysis Plan*

Respondent shall submit one or more Sampling and Analysis Plans to EPA for review and approval in accordance with the approved Work Plan and pursuant to Section X of the Settlement Agreement. Respondent shall also submit a Health and Safety Plan to EPA for review in accordance with the approved Work Plan and pursuant to Section X of the Settlement Agreement.

3.3. *RI Field Work*

Respondent shall conduct RI field work in accordance with any approved SAPs and the Site HSP. Respondent shall notify EPA at least two weeks in advance of any field effort.

3.4. *Groundwater Flow Modeling Plan*

Respondent shall submit a Groundwater Flow Modeling Plan in accordance with the approved Work Plan.

3.5. *Groundwater Flow Modeling*

Respondent shall conduct groundwater flow modeling in accordance with the approved Work Plan and approved Groundwater Flow Modeling Plan.

3.6. *Groundwater Flow Modeling Report*

Respondent shall submit a Groundwater Flow Modeling Report in accordance with the approved Work Plan and Groundwater Flow Modeling Plan.

3.7. *Interim Remedial Investigation Report(s)*

Respondent shall submit to EPA for review and approval one or more draft Interim RI Report(s) in accordance with the approved Work Plan.

3.8. *Remedial Alternatives Screening TM*

Respondent shall submit a TM documenting the results of the effort to screen remedial alternatives in accordance with the approved Work Plan.

3.9. *Remedial Alternatives Evaluation TM*

Respondent shall submit a TM documenting the results of the evaluation of remedial alternatives in accordance with the approved Work Plan.

3.10. *ARARs TM*

Respondent shall submit a TM documenting the results of the effort to identify ARARs in accordance with the approved Work Plan.

3.11. *Risk Assessment TM*

Respondent shall submit one or more TMs documenting the results of the baseline human health and ecological risk assessments in accordance with the approved Work Plan.

3.12. *RI/FS Report*

Respondent shall submit a draft RI/FS Report in accordance with the approved Work Plan.

3.13. *Soils OU Evaluation TM*

Respondent shall submit a TM describing the results of an evaluation of the need for a response action to remediate contaminated soils at the Soils OU in accordance with the approved Work Plan.

3.14. *Community Involvement Activities*

Respondent shall implement any community involvement activities specified in the approved Work Plan or that EPA directs Respondent to complete. EPA expects to take the lead role in implementing community involvement activities at the Site but may request that Respondent assist EPA by participating in public meetings, preparing fact sheets, placing documents in the local information repository, placing announcements in local newspapers, or other community involvement activities related to the MBOU or the Soils OU.

4. Sampling and Analysis Plan(s) and Health and Safety Plan(s)

In accordance with Section IX of the Settlement Agreement, Respondent shall prepare one or more Sampling and Analysis Plans for field and laboratory activities required to implement the RI/FS. SAPs are required for sample collection and analysis as well as physical measurements such as groundwater levels, borehole geophysics, aquifer parameters, and geodetic survey data.

Any SAP submitted pursuant to this SOW shall consist of a Field Sampling Plan (“FSP”) and a Quality Assurance Project Plan (“QAPP”), as described in EPA guidance, including, without limitation, “EPA Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/600/R-02/009, December 2002 or subsequently issued guidance), and “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” (EPA 240/B-01/003, March 2001 or subsequently issued guidance). Key guidance documents are listed in Attachment 3. The plans shall include, or be accompanied by, a schedule for implementation of the planned sampling, analysis, and reporting activities. The FSP and QAPP may be submitted separately or as one document. Upon EPA approval of a SAP, the Respondent shall implement the activities described in the SAP.

- a. The FSP shall describe sampling and data gathering objectives; planned uses of the data; sampling and data collection methods; sample locations and frequencies; sampling equipment

and equipment decontamination procedures; sample preservation, packing, labeling, and shipment procedures; chain-of-custody procedures; numbers and types of samples (including quality control ["QC"] samples); use and maintenance of field logs; and management of investigation-derived wastes. For groundwater wells, the FSP shall also describe well construction and well development procedures.

The FSP shall be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. The FSP shall include a schedule that describes activities that must be completed in advance of sampling, including access agreements and arrangements for disposal of investigation-derived waste. The FSP shall include provisions for the collection of split samples by EPA.

b. The QAPP shall describe the project objectives and organization, functional activities, data quality objectives ("DQOs"), and quality assurance and quality control ("QA/QC") protocols that will be used to achieve the DQOs. In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, document control procedures, preservation of records (in accordance with Section XIV of Settlement Agreement), and procedures that will be used to enter, store, manage, correct, manipulate, review, validate, transfer (to EPA and others), and analyze data, and ensure that reported data are accurate and defensible.

Respondent shall be prepared to demonstrate to EPA's satisfaction that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest at detection and quantification limits consistent with DQOs and requirements specified in the approved QAPP for the work. Respondent shall only use laboratories that have documented Quality Assurance Programs that comply with ANSI/ASQ E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "***EPA Requirements for Quality Management Plans (QA/R-2)***", **EPA/240/B-01/002, March 2001**, or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. If the laboratory is not in the EPA Contract Laboratory Program ("CLP"), Respondent shall submit for EPA review and approval, if EPA requests, a laboratory QA program plan. EPA may require that Respondent submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications.

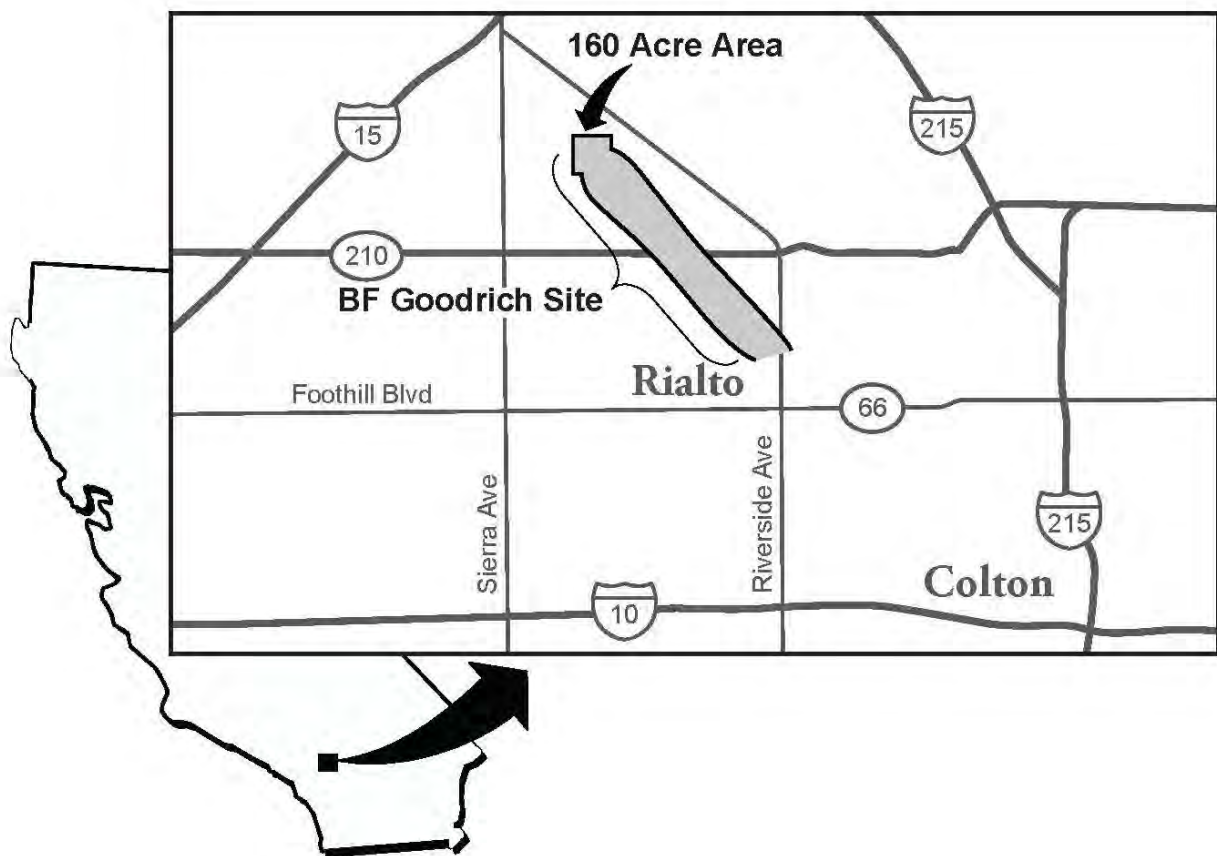
Respondent shall submit analytical data and well construction information to EPA and the State in accordance with the schedule included in Attachment 2.

c. Respondent shall also prepare a Health and Safety Plan in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992 or subsequently issued guidance). In addition, the plan shall comply with all currently applicable Occupational

Appendix A to Administrative Settlement Agreement and Order on Consent, Docket #2013-01

Safety and Health Administration (“OSHA”) regulations found at 29 C.F.R. Part 1910. EPA will review but neither approve nor disapprove the HSP. Respondent shall consider all changes to the plan recommended by EPA and shall implement the plan during the pendency of the RI/FS.

Attachment 1 to the SOW: Site Map



Attachment 2 to the SOW. Due Dates for Major Deliverables and Other Activities

Ref SOW Section	Ref Settlement Agreement Section	Activity or Deliverable	Due ^{1, 2, 3, 4}	EPA Estimated Review period ^{5, 6}
-	-	Effective Date of Settlement Agreement		-
1.2	VIII	Notification of Personnel to be used for the Work, including submittal of QMP	Fourteen (14) days after the Effective Date of the Settlement Agreement	7 days
-	VIII	Notification of Project Coordinator	Fourteen (14) days after the Effective Date of the Settlement Agreement	-
-	XXV	Proof of commercial general liability and automobile liability insurance	Thirty (30) days before commencing any onsite Work	-
Communications and Reporting				
1.3	IX	Monthly Progress Reports	15 th day of each month	-
1.3	IX	Meeting Notes	5 days after any meeting where critical decisions are made	-
-	IX	Notification of Releases from the Site	Immediate notification and submittal of a written report within seven (7) days after each release	-
Remedial Investigation				
3.1	IX	RI/FS Work Plan	Forty-five (45) days after the Effective Date of the Settlement Agreement	30 days
3.3	IX	EPA notification of planned field work	Two weeks before field effort begins	-
3.2	IX	SAP and HSP for RI fieldwork	Forty-five (45) days after the Effective Date of the Settlement Agreement	21 days
3.3	IX	RI fieldwork	As specified in approved SAP	-
3.7	IX	Interim RI Reports	As specified in approved Work Plan	21 days
3.4	IX	Groundwater Flow Modeling Plan	As specified in approved Work Plan	21 days
3.5	IX	Groundwater Flow Modeling	As specified in approved Work Plan or approved Groundwater Flow Modeling Plan	-

Appendix A to Administrative Settlement Agreement and Order on Consent, Docket #2013-01

Ref SOW Section	Ref Settlement Agreement Section	Activity or Deliverable	Due ^{1, 2, 3, 4}	EPA Estimated Review period ^{5, 6}
3.6	IX	Groundwater Flow Modeling Report	As specified in approved Work Plan or approved Groundwater Flow Modeling Plan	30 days
Feasibility Study				
3.11	IX	Risk Assessment TM	As specified in approved Work Plan	21 days
3.10	IX	ARARs TM	As specified in approved Work Plan	21 days
3.8	IX	Remedial Alternatives Identification and Screening TM	As specified in approved Work Plan	21 days
3.9	IX	Detailed Analysis of Remedial Alternatives TM	As specified in approved Work Plan	21 days
3.12	IX	RI/FS Report	As specified in approved Work Plan	30 days
3.13	IX	Soils OU Evaluation TM	As specified in approved Work Plan	30 days
Other				
4	IX	Submittal of analytical data, whether or not validated	Forty-two (42) calendar days of sample shipment to the laboratory or 14 days of receipt of analytical results from the laboratory, whichever occurs first.	-
4	IX	Submittal of validated analytical data	Ninety (90) calendar days of the sample shipment to the laboratory	-
4	IX	Groundwater well construction information	Ninety (90) days after completion of a well.	-

¹ Unless otherwise indicated, all deliverables shall be provided in an electronic format (e.g., PDF) to EPA, EPA's contractor, the Water Board, and DTSC.

² All deliverables set forth in Attachment 2 will be reviewed and approved by EPA in accordance with Section X of the Settlement Agreement, except for the Health and Safety Plan(s), which will be reviewed but neither approved nor disapproved.

³ Revised versions of documents, if needed, are due 14 days after receipt of EPA comments, unless specified otherwise in the Settlement Agreement, this Attachment, or in writing by EPA

⁴ Information presented in color must be interpretable when reproduced in black and white.

⁵ Estimated time is in calendar days.

Appendix A to Administrative Settlement Agreement and Order on Consent, Docket #2013-01

⁶ Failure to review a deliverable within the estimated time shall not constitute a violation of the Settlement Agreement by the United States.

Attachment 3 to the SOW. Selected Guidance and Resources

The following regulations and guidance documents may be relevant during the RI/FS process.

National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule, Federal Register 40 CFR Part 300, March 8, 1990 and as revised

Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992

A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA/600/R-08/003, January 2008

Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER Directive 9283.1-33, June 26, 2009

Superfund Green Remediation Strategy, September 2010, available at: <http://www.epa.gov/superfund/greenremediation/sf-gr-strategy.pdf>

CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, (DRAFT), OSWER Directive No. 9234.1-01 and -02, August 1988

Superfund Community Involvement Handbook, U.S. EPA, Office of Solid Waste and Emergency Response, EPA-540-K-05-003, April 2005

Policy Guidance for Direct Domestic Use of Extremely Impaired Sources, California Department of Public Health Policy Memorandum 97-005

Clarification of the Role of Applicable, or Relevant and Appropriate Requirements in Establishing Preliminary Remediation Goals Under CERCLA, EPA 540/F-97/008, OSWER 9200.4-23, August 1997

USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, USEPA-540-R-08-01, June 2008, EPA Office of Emergency and Remedial Response (see <http://www.epa.gov/superfund/programs/clp/> for most recent versions).

USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, EPA 540-R-10-011, January 2010 (see <http://www.epa.gov/superfund/programs/clp/> for most recent versions).

EPA Guidance on Systematic Planning Using the Data Quality Objectives Process (QA/G-4), February 2006

EPA Requirements for Quality Management Plans (QA/R-2), EPA/240/B-01/002, March 2001

EPA Requirements for Quality Assurance Project Plans (QA/R-5), EPA/240/B-01/003, March 2001

EPA Region IX Sampling and Analysis Plan Guidance and Template, R9QA/002.1, April, 2000

Region 9 Superfund Data Evaluation/Validation Guidance (Draft), USEPA, Quality Assurance Office, R9QA/006.1, December 2001

Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA Office of Solid Waste and Emergency Response (OSWER) Directive 9355.3-10., U.S. EPA, Office of Emergency and Remedial Response, EPA/IS40/G-89/004, October 1988.

Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs, American National Standards Institute (ANSI), ANSI/ASQ E4 1994, January 5, 1995.

California Code of Regulations (CCR) Title 8, Article 109, Section 5192 Hazardous Waste Operations and Emergency Response (HAZWOPER), California Occupational Safety and Health Administration (Cal OSHA)

Code of Federal Regulations, Occupational Safety and Health Administration (OSHA), (CFR) Title 29, Section 1910.120

A Compendium of Superfund Field Operations Methods, EPA Office of Solid Waste and Emergency Response (OSWER), Directive No. 9355.0-14, August 1987.

CERCLA Compliance With Other Laws Manual, EPA Office of Solid Waste and Emergency Response (OSWER), Directive Nos. 9234.1 (part I) and 9234.1-02 (part 2), Part I -August 1988 and Part II -August 1989.

Attachment 4 to the SOW. Documents and Data Relevant to the MBOU

Report Date	Type of Data Available (consultant)
Oct. 21, 2006	Goodrich 2006 installation and initial sampling of groundwater monitoring wells PW5 through PW9 (GeoSyntec Consultants)
Mar 5, 2008 (summary table)	EPA sampling in 2008 of approximately fourteen (14) existing groundwater monitoring and water supply wells (CH2M Hill)
April 22, 2008	Colton 2008 installation and initial sampling of groundwater monitoring wells CPW-16 and CPW-17 (DPRA)
May 20, 2009 (summary table)	EPA sampling in 2009 of approximately fourteen (14) existing groundwater monitoring and water supply wells (CH2M Hill)
Feb 2010	Emhart report summarizing groundwater data from Emhart and others (Environ)
Jun 4, 2010 (summary table)	EPA 2010 sampling of approximately 25 existing groundwater monitoring and water supply wells (CH2M Hill)
August 2010	EPA 2009 installation and initial sampling of groundwater monitoring wells EPA-MP1 through EPA- MP6 (CH2M Hill)
Aug 25, 2011 (summary tables)	EPA 2011 sampling of approximately 22 existing groundwater monitoring and water supply wells (ITSI)
June 2012	EPA Numerical Groundwater Flow Model Report, Rialto-Colton Basin (CH2M Hill)
June 27, 2012 (summary tables)	EPA 2012 sampling of approximately 22 existing groundwater monitoring and water supply wells (analytical sample results revised 9/18/12) (ITSI)
July 19, 2012	ESTCP Evaluation of Perchlorate Sources in the Rialto-Colton-Fontana Area Using Chlorine and Oxygen Stable Isotope Ratio Analysis and Depth Dependent Water Quality Data , Preliminary Results (USGS, Shaw Environmental, Univ. Ill At Chicago)
October 2, 2012 (summary table)	EPA 2011/2012 installation and sampling groundwater monitoring wells EPA-MP7 and EPA- MP8 (ITSI)

Attachment 5. Documents and Data Relevant to the Soils OU

Report Date	Type of Data Available (consultant)
Apr. 11, 2003	Analysis of approximately thirty (30) soil samples to a maximum depth of 8' below ground surface (bgs) in areas used by American Promotional Events - West, Inc. (APE). All samples were analyzed for perchlorate and two (2) samples were analyzed for VOCs. (PES Environmental, Inc.)
Dec. 15, 2003	Analysis of approximately nine (9) soil samples from (3) three trenches to a maximum depth of 10' bgs, and approximately six (6) soil samples from a boring to a maximum depth of 50' bgs, in areas used by Pyro Spectaculars. All samples were analyzed for perchlorate and VOCs. (Kleinfelder, Inc.)
Jan. 6, 2004	Analysis of approximately eight (8) soil samples to a maximum depth of 8' bgs in an area used by APE, to further evaluate contaminated soil detected in Mar 2003 investigation. (PES Environmental, Inc.)
Apr. 20, 2004	Analysis of approximately forty-six (46) soil samples from eleven (11) locations, to a maximum depth of 15' bgs, in areas owned by Wong Chung Ming. All samples were analyzed for perchlorate and twenty-two (22) samples were analyzed for VOCs. (Locus Technologies)
Mar. 24, 2005	<p>Analysis of approximately twelve (12) soil samples at eight (8) locations, and one hundred and one (101) soil gas samples at sixty-one (61) locations, to a maximum depth of 12' bgs in areas associated with former B.F. Goodrich operations. All soil and groundwater samples analyzed for perchlorate, VOCs, metals, NDMA, 1,4-dioxane, RDX, and selected anions.</p> <p>Installation and sampling of eighteen (18) temporary wells, installation and initial sampling of four (4) permanent groundwater monitoring wells (PW1-PW4), and installation of three (3) piezometers (PW2A - PW4A). (GeoSyntec Consultants)</p>
Feb. 10, 2005	Analysis of approximately twenty-three (23) soil samples from twelve (12) locations, and ninety-six (96) soil gas samples from forty-seven (47) locations, to a maximum depth of 12' bgs in areas associated with West Coast Loading Corp. Soil samples analyzed for perchlorate, VOCs, metals, NDMA, 1,4-dioxane, RDX, and other anions. (Environ (International Corp.)
Apr. 15, 2005	Analysis of approximately eleven (11) soil samples. Five (5) samples from trenches to a maximum depth of 5' bgs. Six (6) samples from two borings through the bottom of the former "McLaughlin Pit" to a maximum depth of 20' bgs. All soil samples analyzed for perchlorate. One composited sample was analyzed for VOCs. (Kleinfelder, Inc.)
Jan. 27, 2006	Analysis of approximately fifty-one (51) soil samples from twenty-two (22) locations at depths of 5' or 10' bgs for perchlorate in the area where a buried pyrotechnic round was discovered in September 2003. Most samples also analyzed for VOCs, SVOCs, metals, PCBs, and explosives. Analysis of approximately forty (40) soil gas samples. (Blasland, Bouck & Lee, Inc)
June 23, 2006	Analysis of approximately twenty-three (23) soil samples, from either a trench or potholes in the area where a buried pyrotechnic round was discovered, to a maximum

Appendix A to Administrative Settlement Agreement and Order on Consent, Docket #2013-01

	depth of 8' bgs, and approximately eight (8) samples from stockpiled or excavated soils. Some samples also analyzed for metals. (Kleinfelder, Inc.)
Sept. 2008	<p>Analysis of approximately three hundred and fifty-five (355) soil samples and one hundred and twenty-four (124) soil gas samples, in twenty-eight (28) study areas that may have been associated with West Coast Loading Corp activities, and additional areas associated with other operations on the 160 Acre Area. Soil samples were collected to a maximum depth of 25' bgs, except in Study Areas 18, 28, 41 and 46, where deeper sampling occurred.</p> <p>Installation and initial sampling of three (3) groundwater monitoring wells by Pyro Spectaculars (CMW-01, CMW-02, CMW-03), and two (2) wells by Emhart Industries (CMW-04 and CMW-05). (Environ International Corp. and Adverus)</p>
July 27, 2007	Analysis of approximately forty-one (41) soil samples from approximately fourteen (14) locations at depths of up to 52' bgs for perchlorate in the area where a buried pyrotechnic round was discovered. Some samples also analyzed for metals (Kleinfelder, Inc.)
Sept. 4, 2008	Analysis of approximately nine soil samples from three borings at depths of up to 16.5' bgs for perchlorate, and approximately twenty (20) soil samples from one deep boring at depths of up to 200' bgs for perchlorate (Kleinfelder, Inc.)
Feb 2010	Analysis of approximately 127 soil samples in five study areas associated with West Coast Loading Corp activities(Environ International)
Nov 2010	EPA analysis of soil and soil gas samples from two 100-foot deep borings installed in the footprint of the former B.F. Goodrich disposal pit, and from a third 100-foot boring adjacent to the former pit. (CH2M Hill)

**Appendix B to Administrative Settlement Agreement and Order on Consent,
Docket #2013-01**

